UNITED STATES PATENT AND TRADEMARK OFFICE

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| 10/580,064 | 05/22/2006 | Bart A. Salters | US030458 | 3526 |

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| EXAMINER |
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| CERULLO, LILIANA P |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | | Application No. | Applicant(s) |
|---|---|---|---|
| ***Office Action Summary*** | | 10/580,064 | SALTERS ET AL. |
| | | Examiner | Art Unit | |
| | | LILIANA CERULLO | 2629 | |
| -- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --* | | | | |

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>22 May 2006</u>.
2a)☐ This action is **FINAL**.    2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-20</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>22 May 2006</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>5/22/2006</u>.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

## DETAILED ACTION

### *Double Patenting*

1.      The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and  *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

      A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

      Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2.      Claims 1-20 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1-25 of

copending Application No. 10/565,668 and co-pending Application No. 10/565,659.

Although the conflicting claims are not identical, they are not patentably distinct from

each other because the instant claims are merely broader than or constitute obvious

variations of the co-pending application claims.  For example, the instant independent

claims 1 and 13 recite scanning an embedded position marker in a first portion and

based on that position, writing in a second portion; these limitations are covered in co-

pending application 10/565,668 claims 1, 10, 5 and 20; and in co-pending application

10/565,659 claims 1, 4 and 10.

3.       Similar analysis applies to instant dependent claims with respect to both co-

pending application 10/565,668 and 10/565,659 dependent claims.

         This is a <u>provisional</u> obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.


### *Drawings*

         The drawings are objected to under 37 CFR 1.83(a) because they fail to show

the steps recited with regards to Figs. 5 and 6 as described in the specification pg. 10 to

11. Any structural detail that is essential for a proper understanding of the disclosed

invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing

sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the

appropriate figure must be removed from the replacement sheet, and where necessary,

the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement

sheets may be necessary to show the renumbering of the remaining figures. Each

drawing sheet submitted after the filing date of an application must be labeled in the top

margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.


### *Claim Rejections - 35 USC § 102*

4.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.


5.      **Claims 1-4, 7-10, 12-15 and 17-20** are rejected under 35 U.S.C. 102(b) as being

anticipated by Ericson et al. in US 2002/0024542 (hereinafter Ericson).


6.      Regarding **claim 1**, Ericson teaches a method of activating an electronic paint

(para. 47 lines 11-20, Fig. 8c referring to printing on magnetic paper, where the printing

occurs by activating the magnets at the positions in near proximity to a pointer),

comprising:

scanning a first embedded position marker (para. 23, recording image of a

position-coding pattern) in a first portion of an image written onto a first portion of the

electronic paint (Fig. 6 and para. 36, where the first portion of an image is position 40);

determining a position of an electronic brush (Fig. 1) based on the scanned

position marker (para. 36, determination of positions 40, 41 and prediction of position

42);

modifying image data to embed a second position marker (para. 36 teaches

printing in predicted position 42, and para. 27 and Fig. 3, teach how each position is

embedded with a mark by distance and location from a virtual raster point 14, thus

teaching embedding a second position marker on predicted position 42) in a second

portion of the image based on the determined position of the electronic brush (Fig. 6,

and para. 36 referring to printing on position 42); and

writing the second portion (Fig. 6, position 42) of the image (Fig. 6, "anoto")

including the second position marker (as explained in Fig. 3 and para. 27, each position

has a position marker) onto a second portion of the electronic paint (Fig. 6, position 42).


7.      Regarding **claim 2**, Ericson teaches wherein determining the position of the

electronic brush includes comparing the scanned position marker (Fig. 7, marker 43

which is the central position on paper 44) to unmodified image data (graphics positions

of para. 44 before transformation), and determining the position of the electronic brush

based on the comparison (Fig. 7 and para. 43, position 46 which is the position after

transformation).


8.      Regarding **claim 3**, Ericson teaches wherein determining the position of the

electronic brush includes determining a plurality of position-marker elements (Fig. 5 and

para. 29 where the position is determined based on a matrix, and Fig. 3 where the

elements of the matrix are marks 15) within the first embedded position marker (matrix

13 of Fig. 2 and Fig. 5), determining a position-marker element state for each position-

marker element (para. 27 where it is explained that the direction and distance from the

virtual raster 14 defines a value) within the first embedded position marker (matrix 13 of

Fig. 2 and Fig. 5), and determining a marker position associated with the first embedded

position marker based on the position-marker element states (para. 29 where the matrix

defines a position based on the values from the different elements).


9.      Regarding **claim 4**, Ericson teaches wherein modifying the image data to embed

the second position marker in the second portion of the image (Fig. 6, predicted position

42) includes manipulating at least one image pixel in a position marked region (Fig. 6,

position 41, which is used to predict position 42) in the second portion (Fig. 6, where the

second portion can include positions 41 and 42) of the image (Fig. 6, "anoto").


10.     Regarding **claim 7**, Ericson teaches wherein modifying the image data to embed

the second position marker in the second portion of the image (Fig. 6, position 42)

includes determining a position-marker element state for a plurality of position-marker

elements (Fig. 5 and para. 29 where the position is determined based on a matrix, and

Fig. 3 where the elements of the matrix are marks 15) within the second position marker

(para. 35 teaches the position 42 of Fig. 6, to be also a matrix 13 of Figs. 2 and 5), and

adjusting the image data based on the position-marker element states (para. 29 where

the matrix defines a position based on the values from the different elements, and as

seen in Fig. 3, the elements can be different based on the desired position).

11.      Regarding **claim 8**, Ericson teaches wherein modifying the image data to embed

the second position marker in the second portion of the image (predicted position 42 of

Fig. 6) includes determining a position-marker element state for a plurality of position-

marker elements (Fig. 5, 5x5 matrix) within the second position marker (predicted

position 42), and adjusting the image data based on the position-marker element states

(para. 36 where the image data is printed for position 42, and Fig. 3 and 5 where the

positions are coded) and a position-marker mask (para. 34 teaches that the

subsequence values can include one unit greater when moving one row in the matrix,

thus teaching the use of a mask for manipulating the sequences Sx1-Sx5 to form

sequence 17).

12.      Regarding **claim 13**, Ericson teaches a system for activating an electronic paint

(para. 47 lines 11-20, Fig. 8c referring to printing on magnetic paper, where the printing

occurs by activating the magnets at the positions in near proximity to a pointer),

comprising:

         means for scanning (Fig. 1) a first embedded position marker (para. 23,

recording image of a position-coding pattern) in a first portion of an image written onto a

first portion of the electronic paint (Fig. 6 and para. 36, where the first portion of an

image is position 40);

means for determining a position (processor 5 of Fig. 1) of an electronic brush (Fig. 1) based on the scanned position marker (para. 36, determination of positions 40, 41 and prediction of position 42);

means for modifying image data (magnetic point 54 of Fig. 8c) to embed a second position marker (para. 36 teaches printing in predicted position 42, and para. 27 and Fig. 3, teach how each position is embedded with a mark by distance and location from a virtual raster point 14, thus teaching embedding a second position marker on predicted position 42) in a second portion of the image based on the determined position of the electronic brush (Fig. 6, and para. 36 referring to printing on position 42); and

means for writing (magnetic point 54 of Fig. 8c) the second portion (Fig. 6, position 42) of the image (Fig. 6, "anoto") with the second position marker (as explained in Fig. 3 and para. 27, each position has a position marker) onto a second portion of the electronic paint (Fig. 6, position 42).


13.     Regarding **claims 9 and 14**, Ericson teaches determining a perimeter of the first embedded position. (predetermined size 5x5 matrix 16 of Fig. 2 and para. 25 and para. 28).


14.     Regarding **claims 10 and 15**, Ericson teaches determining an orientation of the first embedded position marker (Figs. 3, 5 and para. 27, 29).

15.    Regarding claims **12 and 17**, Ericson teaches writing the first portion (Fig. 6 and

para. 36, where the first portion of an image is position 40) of the image (Fig. 6, "anoto")

onto the first portion of the electronic paint (Fig. 6, printing position 40), the first portion

of the image including the first embedded position marker (Fig. 3, teach how each

position is embedded with a mark by distance and location from a virtual raster point

14).


16.    Regarding **claim 18**, Ericson teaches an electronic brush (Fig. 1) for activating

an electronic paint (para. 47 lines 11-20, Fig. 8c referring to printing on magnetic paper,

where the printing occurs by activating the magnets at the positions in near proximity to

a pointer), comprising:

     an electronic-brush housing (as shown in Fig. 1);

     an electronic-paint activation device (magnetic point 54 of Fig. 8c) coupled to the

electronic-brush housing (para. 47 teaches the that the magnetic point may be used in

printer 1 of Fig. 1);

     an electronic-brush scanner (Image sensor 3 of Fig. 1, and para. 21 where it can

include a CCD) coupled to the electronic-brush housing (as shown in Fig. 1); and

     a controller (processing means 5 of Fig. 1) in electrical communication with the

electronic-paint activation device and the electronic-brush scanner (para. 22); wherein a

position of the electronic brush (para. 29 where a position coding pattern 13 defines a

position) is determined based on at least one embedded position marker (as shown in

Fig. 3 and explained in para. 27) in a first portion of an image written onto a first portion

of electronic paint (Fig. 6 and para. 36, where the first portion of an image is position 40) that is scanned by the electronic-brush scanner (Image sensor 3 of Fig. 1) and communicated to the controller (processing means 5 of Fig. 1), and wherein an electronic-paint write signal is sent from the controller to the electronic-paint activation device (para. 22 teaches the processing means 5 for processing an image, and para. 23 teaches that after recording an image of the coded pattern, printing can began) based on the determined electronic-brush position (as explained for Fig. 6 in para. 36).

17.    Regarding **claim 19**, Ericson teaches the controller wired or wirelessly connected to the electronic pain-activation device and the electronic brush scanner (as shown in Fig. 1. Furthermore para. 22 explains there is a communication unit 7 in the printer of Fig. 1).

18.    Regarding **claim 20**, Ericson teaches the electronic-brush scanner including at least one imaging array (image sensor 3 of Fig. 1, and para. 21 where the image sensor may include a CCD).

### *Claim Rejections - 35 USC § 103*

1.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.      Claims **5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ericson et al. in US 2002/0024542 in view of Low et al. in US 205/0012735 (hereinafter

Low).

Ericson teaches coding positions based on a position marker location (Ericson,

para. 27 with respect to Fig. 3); but Ericson fails to teach clearing a least significant bit

block within the coded region. However, Low teaches a method for saving power by

limiting color components options in a display (Low, para. 21), the method including

reducing the number of bits by eliminating a least significant bit or any other number of

bits (Low, para. 30). Thus, it would have been obvious to one of ordinary skill in the art

at the time of the invention, to clear a least significant bit(s) in Ericson coding method, in

order to obtain power saving benefits (as taught by Low in para. 30). Clearing the least

significant bit in Ericson's method would still result in setting a coded bit state (one state

of Ericson's Fig. 3) within the coded region.


3.      **Claims 11 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ericson et al. in US 2002/0024542 in view of Wilz, SR. et al. in US 2004/0173684

(hereinafter Wilz).

4.      Ericson teaches scanning a plurality of embedded position markers (Ericson,

markers in Fig. 5) in the first portion of the image (Ericson, position 41 of Fig. 6); and

determining relative movements (Ericson, para. 39) of the electronic brush (Ericson, Fig.

1) based on the scanned plurality of embedded position markers (Ericson, para. 39).

However, Ericson does not explicitly teach determining rotation. However, Wilz, teaches

a handheld scanner which determines rotation (Wilz, para. 38). Thus, it would have

been obvious to one of ordinary skill in the art at the time of the invention to add rotation

detection capability to the image sensor of Ericson's printer (Ericson, Fig. 1), in order to

obtain the benefit of determining rotation with respect to a reference point, given that

Ericson's printer is a handheld device like Wilz's scanner.


## Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LILIANA CERULLO whose telephone number is

(571)270-5882. The examiner can normally be reached on Monday to Thursday 8AM-

4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.  Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


LC

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629